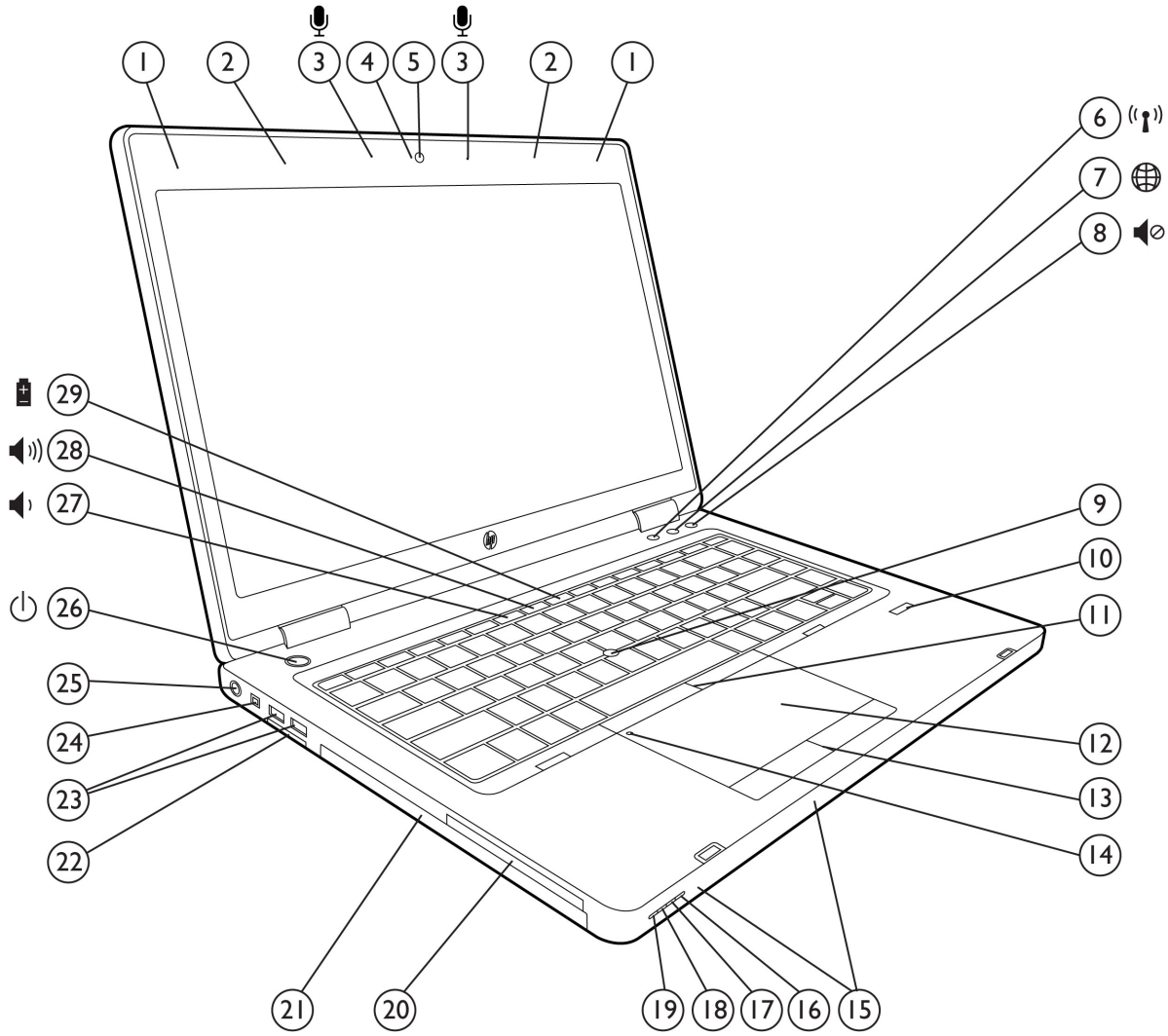
## HP ProBook 6465b Notebook PC




1. WLAN antennas
2. WWAN antennas (select models)
3. Dual-microphone array*
4. Webcam LED indicator (with optional webcam)
5. Optional HD webcam
6. Wireless on/off button with LED indicator
7. HP QuickWeb button with LED indicator
8. Volume mute button with LED indicator
9. Optional pointstick
10. Optional HP Fingerprint Sensor
11. Pointstick pick buttons (with optional pointstick)
16. Hard drive activity/HP 3D DriveGuard LED indicator
17. Battery charging LED indicator
18. Power/standby LED indicator
19. Wireless on/off LED indicator
20. ExpressCard/54 slot or optional Smart Card Reader
21. Upgrade Bay (optical drive, second hard drive or weight saver)
22. Secure Digital/MMC slot
23. (2) USB 2.0 ports
24. 1394a port
25. Power connector
26. Power button with LED indicator

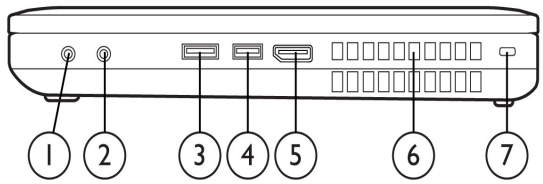
*Overview*

12. Touchpad
13. Touchpad pick buttons
14. Touchpad on/off button with LED indicator
15. Stereo speakers

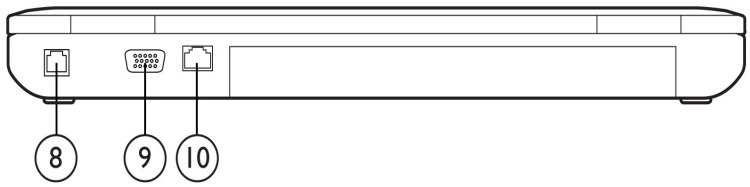
27. Volume down function key <F6>
28. Volume up function key <F7>
29. HP Power Assistant function key <F8>

* Models without optional webcam have single integrated microphone on left side of display panel.

Right View



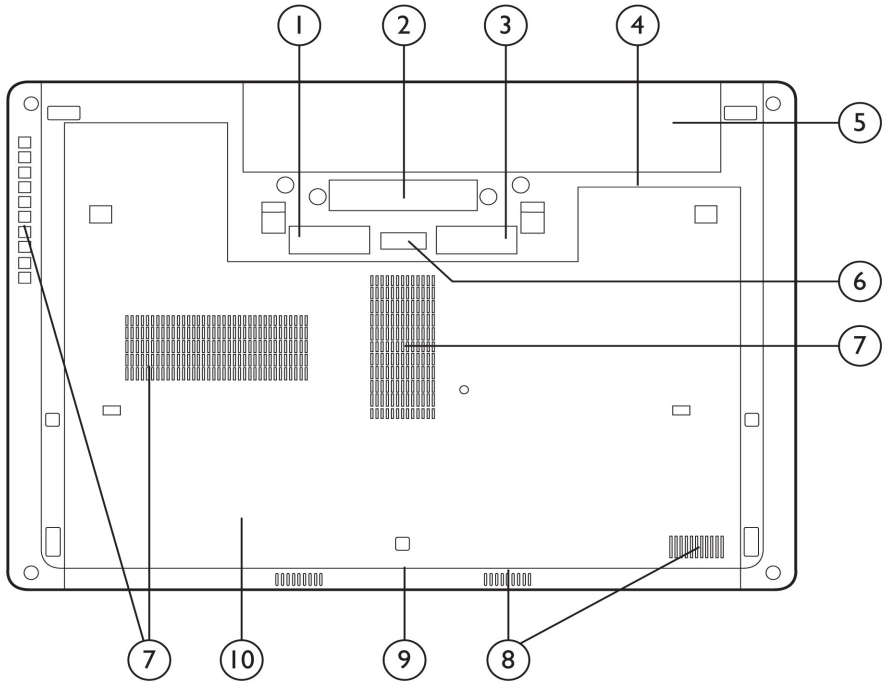

Rear View




1. Stereo headphone/line out
2. Stereo microphone/line in
3. eSATA/USB 2.0 combo port
4. (1) USB 2.0 port
5. DisplayPort

6. Vents
7. Security lock slot
8. RJ-11/modem port
9. VGA/external monitor connector
10. RJ-45/Ethernet port

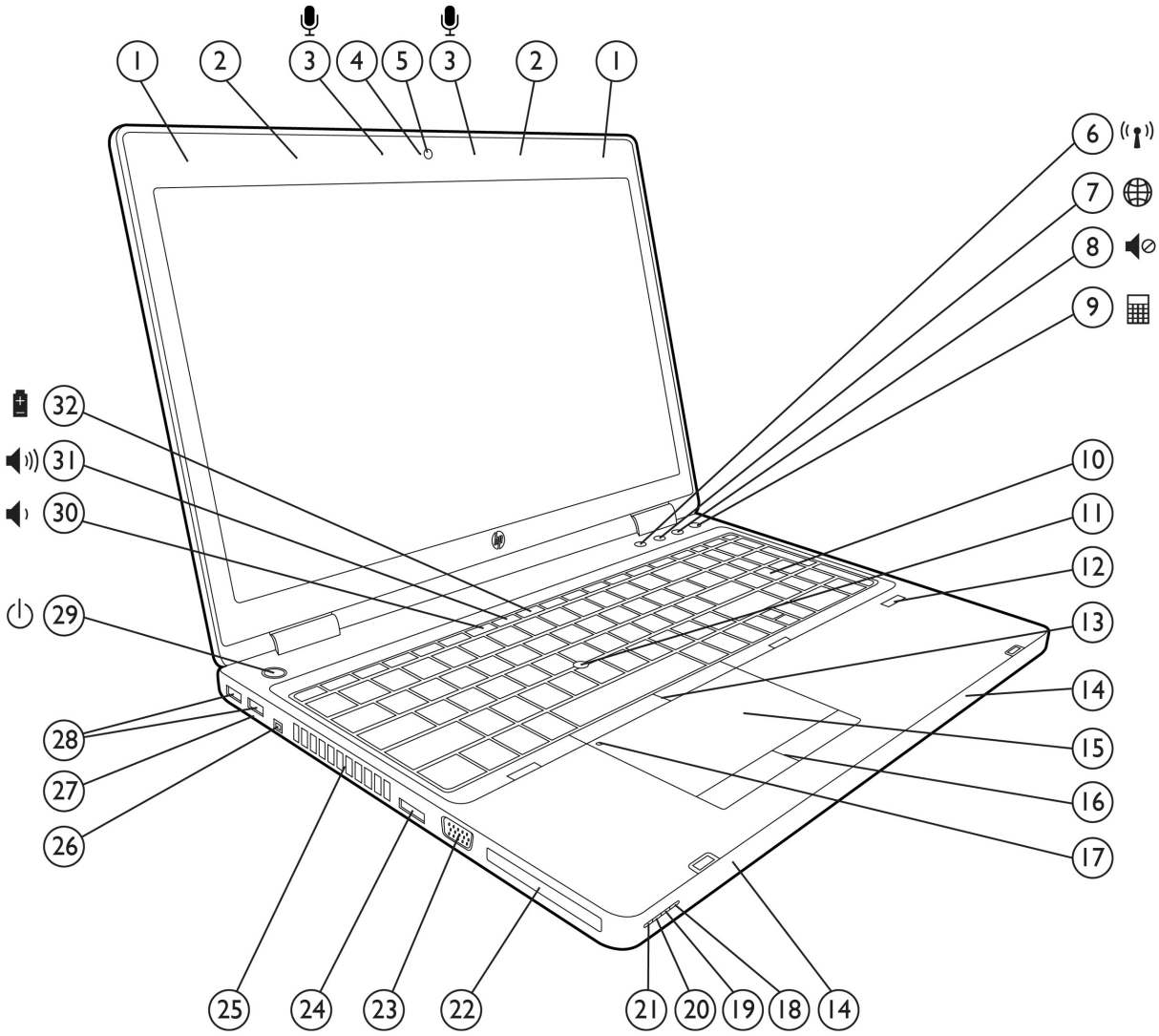
Bottom View



*Overview*

1. Battery release latch
2. Docking connector
3. Bottom cover release latch
4. SIM slot for WWAN (select models)
5. Battery bay
6. Secondary battery connector
7. Vents
8. Speakers
9. Bluetooth module compartment
10. Hard drive, memory, and wireless compartments under bottom cover

## HP ProBook 6565b Notebook PC

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2. WWAN antennas (select models)
3. Dual-microphone array*
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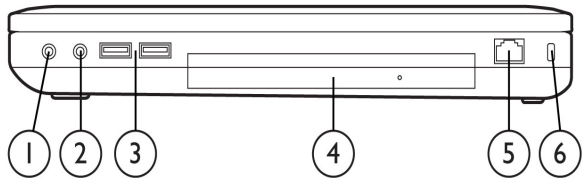
5. Optional HD webcam
6. Wireless on/off button with LED indicator
17. TouchPad on/off light
18. Hard drive activity/HP 3D DriveGuard LED indicator
19. Battery charging LED indicator
20. Power/standby LED indicator
21. Wireless on/off LED indicator
22. ExpressCard/54 slot or optional Smart Card Reader

*Overview*

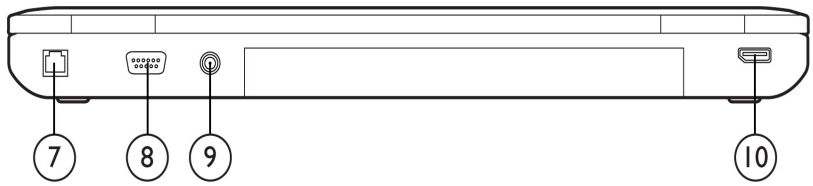
7. HP QuickWeb button with LED indicator
8. Volume mute button with LED indicator
9. Calculator button with LED indicator
10. Numeric keypad
11. Optional pointstick
12. Optional HP Fingerprint Sensor
13. Pointstick pick buttons (with optional pointstick)
14. Stereo speakers
15. Touchpad
16. Touchpad pick buttons
23. VGA/external monitor connector
24. eSATA/USB 2.0 combo port
25. Vent
26. 1394a port
27. Secure Digital/MMC slot
28. (2) USB 2.0 ports
29. Power button with LED indicator
30. Volume down function key <FN 6>
31. Volume up function key <FN 7>
32. HP Power Assistant function key <FN 8>

* Models without optional webcam have single integrated microphone on left side of display panel.

Right View




Rear View




1. Stereo headphone/line out
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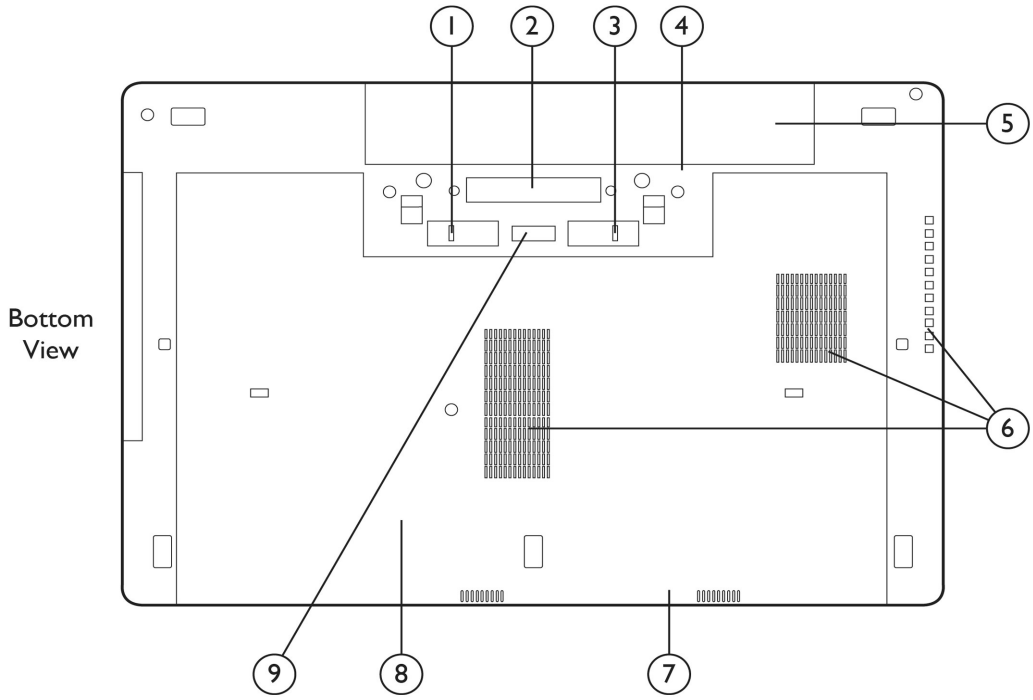
3. (2) USB 2.0 ports
4. Upgrade Bay (optical drive or second hard drive or weight saver)
5. RJ-45/Ethernet port
6. Security lock slot
7. RJ-11/modem port
8. Serial port
9. Power connector
10. DisplayPort

*Overview*




1. Battery release latch
2. Docking connector
3. Bottom cover release latch
4. SIM slot for WWAN (select models)
5. Battery bay
6. Vents
7. Bluetooth module compartment
8. Hard drive, memory, and wireless compartments under bottom cover
9. Secondary battery connector

## At A Glance

- Genuine Windows 7 versions, SUSE Linux Enterprise Desktop 11, or FreeDOS
- All new design with bead-blast aluminum display enclosure, magnesium support structure, wear-resistant tungsten-colored HP DuraFinish, HP DisplaySafe frame, precision latches, and brushed aluminum palm rest
- Widescreen LED-backlit display
  HP ProBook 6465b: 14.0-inch diagonal HD or HD+
  HP ProBook 6565b: 15.6-inch diagonal HD or HD+ WVA
- Touchpad and optional pointstick
- Choice of standard ExpressCard slot or optional integrated Smart Card Reader for strong security authentication
- Optional HP Fingerprint Sensor for the additional security and convenience of single sign-on for Windows and websites
- Optional HD webcam comes with dual-microphone array
- Choice of primary battery to optimize run time or weight: 9-cell (100 WHr), 6-cell (55 WHr), or 6-cell HP Long Life 3-year (55 Whr)
- Combine primary battery with optional secondary battery options
- Easily hot dock with one of the optional HP docking stations
- DisplayPort for external high resolution graphics support
- Accelerated Processing Unit and graphics powered by VISION Technology from AMD
- SRS Premium Sound optimized for high-fidelity audio
- Security features including HP ProtectTools, with central management across HP and non-HP client PCs
- HP Power Assistant allows you to conserve power, stretch battery run time, accurately monitor your reported power need, and

report workforce power consumption.

- HP QuickWeb for convenient online access without the standard boot-up time
- HP DayStarter for calendar display during startup
- Flexible wireless connectivity options:
  - Optional integrated HP hs2340 HSPA+ Mobile Broadband Module connects to both HSPA and HSPA+ (UMTS) networks
  - Optional integrated HP un2430 EV-DO/HSPA Mobile Broadband Module (Gobi 3000)
  - Integrated Broadcom 802.11 a/b/g/n or b/g/n wireless LAN module
  - Bluetooth® v2.1+EDR
- Upgrade Bay for optical drive, optional second hard drive, or weight saver
- Choice of 7200 rpm user-removable hard drive up to 500 GB with HP 3D DriveGuard protection, or 128 GB Solid State Drive
- BFR/PVC-free,* ENERGY STAR® qualified models,** EPEAT® Gold registered in the U.S. (EPEAT status varies by country—please see www.epeat.net.)

* Meeting the industry definition of 'BFR/PVC-free' per the iNEMI Position Statement on "Low Halogen" Electronics. Plastic parts incorporated into the chassis generally contain < 1000 ppm (0.1%) of bromine or chlorine. Printed circuit board and substrate laminates generally contain < 1500 ppm (0.15%) of total bromine and chlorine. Service parts after purchase may not be BFR/PVC-free. External accessories, including power supplies, power cords, and peripherals are not BFR/PVC-free.

**Microsoft® Windows® is required for ENERGY STAR qualification.

*Standard Features (availability may vary by country)*

| | | |
|---|---|---|
| Accelerated Processing Unit (APU) | VISION Technology from AMD<br>AMD Quad-Core A6-3410MX with AMD Radeon HD 6520G Graphics (2.3 GHz/1.6 GHz, 4 MB L2 cache, 45W)<br>AMD Dual-Core A4-3310MX with AMD Radeon HD 6480G Graphics (2.5 GHz/2.1 GHz, 2 MB L2 cache, 45W)<br>NOTE: APU speed denotes maximum performance mode; APUs will run at lower speeds in battery optimization mode. | |
| Operating System | Preinstalled | Genuine Windows 7 Professional 32*<br>Genuine Windows 7 Professional 64*<br>Genuine Windows 7 Home Premium 64*<br>Genuine Windows 7 Home Basic 32* (select countries)<br>SUSE Linux Enterprise Desktop 11<br>FreeDOS |
| | Supported | Genuine Windows 7 Enterprise 32*<br>Genuine Windows 7 Enterprise 64*<br>Genuine Windows 7 Ultimate 32*<br>Genuine Windows 7 Ultimate 64*<br>Genuine Windows Vista Enterprise 32**<br>Genuine Windows Vista Enterprise 64**<br>Genuine Windows Vista Business 32**<br>Genuine Windows Vista Business 64**<br>Genuine Windows XP Professional 32 |
| | Certified | SUSE Linux Enterprise Desktop 11 |
| | * System may require upgraded and/or separately purchased hardware and/or a DVD drive to install the Windows 7 software and take full advantage of Windows 7 functionality. See http://www.microsoft.com/windows/windows-7/ for details.<br><br>** Certain Windows Vista product features require advanced or additional hardware. See: http://www.microsoft.com/windowsvista/getready/hardwarereqs.mspx and http://www.microsoft.com/windowsvista/getready/capable.mspx for details. Windows Vista Upgrade Advisor can help you determine which features of Windows Vista will run on your computer. To download the tool, visit: http://www.windowsvista.com/upgradeadvisor. | |
| Fusion Controller Hub (Chipset) | AMD A60M FCH | |
| Graphics included with Accelerated Processing Unit (APU) | AMD Radeon HD 6520G Graphics (with AMD Quad-Core A6-3410MX APU)<br>AMD Radeon HD 6480G Graphics (with AMD Dual-Core A4-3310MX APU)<br>AMD Radeon HD 6380G Graphics (with AMD Dual-Core E2-3000M APU) | |

*Standard Features (availability may vary by country)*

| | | |
|---|---|---|
| Display | Internal | HP ProBook 6465b:<br>14.0-inch diagonal LED-backlit HD anti-glare (1366 x 768 resolution)<br>14.0-inch diagonal LED-backlit HD+ anti-glare (1600 x 900 resolution)<br><br>HP ProBook 6565b:<br>15.6-inch diagonal LED-backlit HD anti-glare (1366 x 768 resolution)<br>15.6-inch diagonal LED-backlit HD+ WVA anti-glare (1600 x 900 resolution)<br><br>HP Privacy Filter support |
| | External | Up to 32-bit per pixel colour depth<br>DisplayPort supports resolutions up to 2560 x 1600, 30-bit colour depth at 60 Hz, and full HD (1920 x 1080) monitors, 24-bit colour depth at 120 Hz<br>VGA port supports resolutions up to 2048 x 1536 at 75 Hz, and lower resolutions at up to 100 Hz<br>DVI-D (single link) video signal available through DVI port in optional HP Docking Station (sold separately)<br>supports resolutions up to 1600 x 1200 at both full and reduced blanking, and 1920 x 1200 at reduced blanking<br>NOTE: Resolutions are dependent upon monitor capability, and resolution and colour depth settings. |
| Memory | Standard | DDR3 PC3-10600 SDRAM (1333 MHz)<br>Two SODIMM slots supporting dual-channel memory<br>2 GB, 4 GB, and 8 GB SODIMMs |
| | Maximum | Upgradeable to 16 GB with 8 GB SODIMMs in slots 1 and 2 |
| | Dual-channel | Maximized dual-channel performance requires SODIMMs of the same size and speed in both memory slots. |
| | NOTE: Due to the non-industry standard nature of some third-party memory modules, we recommend HP branded memory to ensure compatibility. If you mix memory speeds, the system will perform at the lower memory speed. Full availability of 4 GB or more of memory requires a Windows 64-bit operating system or Linux. With Windows 32-bit operating systems, the amount of usable memory is dependent upon your configuration, so that above 3 GB all memory may not be available due to system resource requirements. | |
| Communications | Integrated Realtek 10/100/1000* NIC<br>56K V.92 modem**<br>* The term "10/100/1000" or "Gigabit" Ethernet indicates compatibility with IEEE standard 802.3ab for Gigabit Ethernet, and does not connote actual operating speed of 1 Gb/s. For high-speed transmission, connection to a Gigabit Ethernet server and network infrastructure is required.<br>** Designed for downloads from 56K modem compliant sources. Maximum achievable download transmission rates currently do not reach 56 KB/s, and will vary with line conditions. Modem availability is subject to country regulatory approval. | |

*Standard Features (availability may vary by country)*

| | | |
|---|---|---|
| Wireless Devices | Support for a broad range of secure, integrated wireless LAN and wireless WAN options featuring support for the latest industry standards. Broadband Wireless (WWAN) requires a Windows operating system and is available in select countries as a standard, factory configurable feature only. Integrated Bluetooth is also available (factory configurable only) and can be combined with any of the supported wireless LAN and wireless WAN options. | |
| | Mobile Broadband options | Two 850/900/1575/1700/1800/1900/2100 MHz antennas integrated in the top of the display panel support current and future WWAN technologies.<br>NOTE: Separately purchased mobile network operator service is required. |
| | HP hs2340 HSPA+ Mobile Broadband Module | Integrated mobile broadband module that provides connectivity to both HSPA and HSPA+ (UMTS) networks. It also provides standalone, Internet and network assisted GPS functionality for various mapping applications and security applications such as Computrace Pro for HP ProtectTools. |
| | HP un2430 EV-DO/HSPA Mobile Broadband Module | Integrated mobile broadband module with Gobi global mobile Internet technology that provides connectivity to both CDMA (EVDO) and UMTS (HSPA) networks. It also provides GPS functionality for various mapping applications and security applications such as Computrace LoJack Pro Premium for HP ProtectTools. |
| | All 802.11 integrated wireless LAN options | Wi-Fi Certified*<br>Cisco Compatible Extensions support<br>Wired Equivalent Privacy (WEP) support up to 128-bit keys<br>Wi-Fi Protected Access (WPA) and WPA2 support<br>802.1x authentication support, including EAP-TLS, EAP-TTLS, PEAP-GTC, PEAP-MSCHAPv2, and LEAP<br>Advanced Encryption Standard (AES) support<br>Dual antennas integrated in the display enclosure |
| | Broadcom 43224AGN 802.11a/b/g/n WiFi Adapter | Integrated support for 802.11 a, b, g, and n<br>Up to 300 mbps data rate |
| | Broadcom 4313GN 802.11b/g/n WiFi Adapter | Integrated support for 802.11 b, g, and n<br>Up to 72 mbps data rate |
| | HP Integrated Module with Bluetooth 2.1+EDR Wireless Technology | Bluetooth Specification v2.1+EDR compliant<br>Works with a wide range of Bluetooth devices |

*Standard Features (availability may vary by country)*

| | | |
|---|---|---|
| **Keyboard** | The keyboard with bottom-case drain is designed using a thin layer of Mylar film under the keyboard and a drain system that funnels fluid through a hole in the bottom of the notebook. This minimizes the risk of damage to sensitive components underneath. The 101/102-key compatible keyboard features a full-pitch key layout with desktop keyboard features, such as the isolated inverted-T cursor control keys, editing keys, both left and right control and alt keys, 12 function keys, and 19.05 x 19.05 mm key pitch (centre-to-centre spacing). U.S. and International key layouts are available. Other features include hot keys for instant access to power conservation and brightness. The HP ProBook 6565b includes a separate numeric keypad. | |
| **Launch Buttons and Function Keys** | Separate launch buttons provide easy access to the following features: wireless on/off, HP QuickWeb, and volume mute. The HP ProBook 6565b also features a calculator launch button. Function keys provide control of the following features: standby mode, external display, volume down, volume up, HP Power Assistant, display brightness down, and display brightness up. | |
| **Pointing device** | Touchpad with on/off button, two-way scroll, gestures, two pick buttons<br>Optional pointstick comes with two additional pointstick buttons | |
| **Internal Storage** | **Hard drives** | 250/320/500 GB 7200 rpm SMART SATA II<br>320 GB 7200 rpm SMART SATA II Self Encrypting Drive |
| | NOTE: These hard drives are customer removable and will withstand multiple insertion/removal cycles. Up to 10 GB is reserved for the system recovery software. | |
| | **HP 3D DriveGuard** (Windows only) | The hard drive is mounted directly to the notebook frame, reducing the transmission of shock to the hard drive. Uses three-axis digital motion detection with intelligent sensitivity to help protect the hard drive during normal use from shock and vibration. The digital accelerometer temporarily halts all data transfer and parks the hard drive when abrupt motion is detected. |
| | Solid State Drive | 128 GB |
| **Upgrade Bay** | **Fixed 12.7 mm SATA optical drive** | Blu-ray ROM DVD+/-RW SuperMulti DL Drive<br>DVD+/-RW SuperMulti DL Drive<br>DVD-ROM Drive |
| | **Second hard drive** | 500 GB 7200 rpm SMART SATA II Hard Drive |
| | **Weight saver** | |
| **Expansion card slots** | **ExpressCard/54 slot** | Supports ExpressCard/54 and ExpressCard/34 |
| | or | |
| | **Optional Integrated Smart Card Reader** (replaces ExpressCard/54 slot) | Compatible with ISO 7816-compliant Smart Cards<br>PC/SC interface support |
| | **Secure Digital/MMC slot** | Supports SD (Secure Digital), SDHC, SDXC, MMC (MultiMedia Card), and MMC+ |

*Standard Features (availability may vary by country)*

| | | |
|---|---|---|
| Interfaces | External monitor | Two - (1) DisplayPort, (1) VGA |
| | 1394a | One |
| | Stereo microphone in | One |
| | Stereo headphone/line out | One |
| | Power connector | One |
| | RJ-11/modem | One |
| | RJ-45/Ethernet | One |
| | USB 2.0 | Three on HP 6465b; four on HP 6565b |
| | eSATA/USB 2.0 combo | One |
| | Serial port | One (HP ProBook 6565b only) |
| | Docking connector | One |
| | Secondary battery connector | One |

Audio/Visual

SRS Premium Sound™
Integrated stereo speakers
Integrated microphone (dual-microphone array when equipped with optional webcam)
Button for volume mute; function keys for volume up and down
Stereo headphone/line out
Stereo microphone/line in

Optional HD webcam

- HD format (widescreen)
- Supports web casting and still-image capture
- High-quality fixed-focus lens
- M-JPEG compression supports higher frame rates for video capture and web casting
- Improved low-light sensitivity
- Improved dynamic range

*Standard Features (availability may vary by country)*

| | | |
|---|---|---|
| Software | Preinstalled software with Windows operating system | HP Recovery Manager<br>HP Support Assistant<br>HP ProtectTools Security Manager<br>HP ProtectTools for Central Management<br>HP Hotkey Support<br>HP QuickWeb<br>HP Power Assistant<br>HP Connection Manager<br>HP DayStarter<br>Microsoft Office 2010 preloaded (purchase of a Product Key required to activate a full Office 2010 suite)*<br>Norton Internet Security 2011**<br>PDF Complete Special Edition***<br>Intervideo WinDVD – DVD Player (select models)<br>Roxio Secure Burn (select models)<br>Roxio MyDVD Business 2010 (select models)<br>HP Webcam Software (select models)<br>Skype |
| | Additional software available from the web | HP SoftPaq Download Manager |

* Microsoft Office 2010 Preloaded includes reduced functionality versions of Word and Excel. Purchase of Product Key required to activate full Office 2010 suite available at participating resellers/retailers and http://www.office.com.
** Norton Internet Security 2011 includes 60 days of complimentary live updates; subscription required for live updates thereafter. Internet access required to receive updates.
*** PDF Complete Special Edition 60 day trial; purchase license afterwards for full functionality.

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**HP Recovery Manager**

Models shipped with Windows 7 include HP Recovery Manager. HP Recovery Manager enables fast recovery of the factory preinstalled image if the system becomes corrupted or if important system files are accidentally deleted. Up to 20 GB of the hard drive is reserved for the system recovery software.

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**Security**

**Standard Features**

HP ProtectTools Security Manager (standard modules include)

- Credential Manager
- Computrace* Pro
- Device Access Manager
- Drive Encryption
- Face Recognition (webcam configurations only)
- File Sanitizer
- Privacy Manager
- Embedded Security

Enhanced Pre-Boot Security (Multiuser/Multifactor)
HP SpareKey
One-Step Logon
TPM 1.2 Embedded Security Chip**
HP Disk Sanitizer
Security lock slot

**Optional Features**

**Smart Card Reader** — Compatible with ISO 7816 compliant Smart

*Standard Features (availability may vary by country)*

| | |
|---|---|
| (replaces ExpressCard/54 slot) | Cards<br>PC/SC interface support |
| HP Fingerprint Sensor | Enhanced sensor scans the fingerprint to uniquely identify and authenticate a person. |
| HP Privacy Filter | Narrows viewing area so that screen data is visible only to persons directly in front of the monitor. |
| Computrace* Pro for HP ProtectTools with GPS Tracking | Subscription based security solution providing the ability to track, initiate physical recovery, conduct asset management, and perform remote data delete by utilizing GPS technology. GPS functionality requires HP Mobile Broadband Module. |

* The Computrace agent is shipped turned off, and must be activated by customers when they purchase a subscription with terms ranging from one to five years.
** TPM module disabled where use is restricted by law, i.e., Russia and China.
For more information on HP security solutions refer to: http://www.hp.com/products/security.

**HP ProtectTools Security Manager with Central Management**

HP ProtectTools Security Manager is the security platform for business notebooks and desktops. The HP ProtectTools Security Manager is an extensible client security console that delivers enhanced security capabilities through add-on software modules. The following modules are available on the hard drive (also downloadable from the web) and can be configured in Software Setup:

- Credential Manager for HP ProtectTools
- Device Access Manager for HP ProtectTools
- Drive Encryption for HP ProtectTools
- Face Recognition with Bluetooth Verification
- File Sanitizer for HP ProtectTools
- Privacy Manager for HP ProtectTools (Chat & Sign)
- Embedded Security for HP ProtectTools
- Computrace Pro for HP ProtectTools

HP ProtectTools is now capable of being centrally managed from a single control point. HP ProtectTools is management ready out of the box, in partnership with Digital Persona, and provides features that customers expect from a centrally managed security solution, such as user provisioning, credential reset, and system and network revocation . Central Management is available in two feature levels:

- Digital Persona Pro Enterprise: Designed for environments with Active Directory. For large businesses, as well as smaller businesses utilizing an active directory based infrastructure. Gives IT Managers the ability to create role based security policies, provision users, and create login policies based on passwords, biometrics or smart cards. Management features also include remote credential recovery in case the user forgets the password, loses the smart card, or cannot use the fingerprint reader for any reason. In addition, advanced auditing capabilities are also built in.
- Digital Persona Workgroup Manager: Designed for environments without Active Directory. This option can be used by smaller businesses as well as workgroups within large organizations. Workgroup Manager offers features similar to Digital Persona Pro Enterprise, but without active directory integration. Workgroup activation is built into HP ProtectTools, and activation of up to 5 seats is completely free.

*Standard Features (availability may vary by country)*

| | | |
|---|---|---|
| **Power Supply** | External 90-watt Smart AC adapter<br>Power cord included is 6 foot (1.8 metre).<br>Total length including external AC adapter is 12 feet (3.66 metre).<br>HP Fast Charge*<br>*HP Fast Charge recharges your battery up to 90% within 90 minutes when the system is off. HP Fast Charge does not apply to the 9-cell primary battery, HP ST09 Extended Life Notebook Battery, or HP BB09 Ultra Extended Life Notebook Battery. | |
| **Battery** | **Primary battery** | HP 9-cell (100 WHr) Li-Ion battery<br>HP 6-cell (55 WHr) Li-Ion battery<br>HP Long Life 6-cell (55 WHr) battery (3-year warranty) |
| | **Optional HP ST09 Extended Life Notebook Battery** | 9-cell (73 WHr) Li-Ion battery |
| | **Optional HP BB09 Ultra Extended Life Notebook Battery** | 9-cell (100 WHr) Li-Ion battery |
| **Battery Life** | **HP ProBook 6465b** | |
| | **6-cell (55 WHr)** | Up to 7 hours and 15 minutes |
| | with optional HP ST09 Extended Life Notebook Battery | Up to TBD hours and TBD minutes |
| | with optional HP BB09 Ultra Extended Life Notebook Battery | Up to TBD hours and TBD minutes |
| | **9-cell (100 WHr)** | Up to TBD hours and TBD minutes |
| | **HP ProBook 6565b** | |
| | **6-cell (55 WHr)** | Up to 6 hours and 30 minutes |
| | with optional HP ST09 Extended Life Notebook Battery | Up to TBD hours and TBD minutes |
| | with optional HP BB09 Ultra Extended Life Notebook Battery | Up to TBD hours and TBD minutes |
| | **9-cell (100 WHr)** | Up to TBD hours and TBD minutes |
| | NOTE: Battery life will vary depending on the product model, configuration, loaded applications, features, use, wireless functionality and power management settings. The maximum capacity of the battery will naturally decrease with time and usage. See MobileMark07 battery benchmark www.bapco.com/products/mobilemark2007 for additional details. | |
| **System Standby Time** | Up to 1 week | |

*Standard Features (availability may vary by country)*

| | |
|---|---|
| Power Conservation | AMD PowerPlay technology<br>Hibernation<br>Standby<br>ACPI compliance |
| Docking and Stands | HP 90W Docking Station<br>HP 120W Advanced Docking Station<br>HP USB 2.0 Docking Station<br>HP Essential USB 2.0 Port Replicator<br>HP LAN and USB Travel Hub<br><br>NOTE: Some HP Docking stations may not support every feature of some HP Notebook models. Please refer to the individual docking station documentation for specific information about supported features. |
| Service and Support | HP Services offers limited 3-year and 1-year warranty options depending on country. On-site service and warranty upgrades are also available. HP Care Pack Services extend service contracts beyond the standard warranties. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at: http://www.hp.com/go/lookuptool. Additional HP Care Pack Services information by product is available at: http://www.hp.com/hps/carepack.<br>NOTE: Certain restrictions and exclusions apply. Consult the HP Customer Support Centre for details. http://h20000.www2.hp.com/bizsupport/TechSupport/ProductRoot.jsp. |

*Options (availability may vary by country)*

| | | |
|---|---|---|
| Memory | HP 2 GB (DDR3 1333 MHz) SODIMM | AT912AA#xxx |
| | HP 4 GB (DDR3 1333 MHz) SODIMM | AT913AA#xxx |
| Storage | HP 250 GB Pocket Media Drive | FE477AA |
| | HP Mobile USB DVD | XQ543AA |
| | HP Mobile USB DVDRW | BU516AA |
| | HP Upgrade Bay SATA 500 GB 7200 rpm Hard Drive | LX733AA#xxx |
| | HP Primary SATA 500 GB 7200 rpm Hard Drive | AU098AA#xxx |
| | HP Upgrade Bay DL DVD+/-RW | LZ835AA |
| Expansion Solutions | HP 90W Docking Station | VB041AA#xxx |
| | HP 120W Advanced Docking Station | NZ222AA#xxx |
| | HP USB 2.0 Docking Station | AY052AA#xxx |
| | HP Essential USB 2.0 Port Replicator | AQ731AA#xxx |
| | HP LAN and USB Travel Hub | BM868AA#xxx |
| | HP Display & Notebook Stand | AW662AA#xxx |
| | HP Adjustable Display Stand | AW663AA#xxx |
| | HP Adjustable Dual Display Stand | AW664AA#xxx |
| Power | HP ST09 Extended Life Notebook Battery | QK639AA |
| | HP BB09 Ultra Extended Life Notebook Battery | QK640AA |
| | HP CC06XL Long Life Notebook Battery | QK642AA |
| | HP CC09 Notebook Battery | QK643AA |
| | HP 90W Smart AC Adapter | ED495AA#xxx |
| | HP 90W Smart AC/Auto/Air Combo Adapter | AJ652AA#xxx |
| | HP 90W Smart Auto/Truck Adapter | ED493AA |
| | HP 90W Slim Adapter | BT796AA#xxx |
| Carrying Cases | HP Basic Carrying Case | AJ078AA |
| | HP Business Nylon Case | BP848AA |
| | HP Professional Slim Top Load Case | AY530AA |
| Security | HP Notebook Combo Lock | AY475AA#xxx |
| | HP Keyed Cable Lock | BV411AA |
| | HP 14.0-inch Display Privacy Filter | AU100AA#xxx |
| | HP 15.6-inch Display Privacy Filter | AU103AA#xxx |

*Options (availability may vary by country)*

| | | |
|---|---|---|
| Input/Output Devices | HP USB Optical Travel Mouse | RH304AA |
| | HP USB/PS2 Optical 2-Button Scroll Mouse | DC369A |
| | HP USB Keyboard & Mouse Bundle | RC465AA#xxx |
| | HP Notebook Projection Companion | AX325AA#xxx |

| | | | |
|---|---|---|---|
| System Unit | **Dimensions** (HxWxD) | HP ProBook 6465b:<br>1.34 in (at front) x 13.31 in x 9.11 in<br>34.0 mm (at front) x 338 mm x 231.3 mm<br><br>HP ProBook 6565b:<br>1.35 in (at front) x 14.72 in x 9.86 in<br>34.3 mm (at front) x 374 mm x 250.5 mm | |
| | **Weight** | HP ProBook 6465b:<br>Starting at 4.46 lb (2.02 kg) with SSD, weight saver (no optical drive)<br>Starting at 4.85 lb (2.20 kg) with hard drive, optical drive<br><br>HP ProBook 6565b:<br>Starting at 5.50 lb (2.50 kg) with hard drive, weight saver (no optical drive)<br>Starting at 5.76 lb (2.62 kg) with hard drive, optical drive | |
| | NOTE: Height varies depending upon where on the notebook the measurement is made. Weight varies by configuration and components. Weight includes WLAN. | | |
| | **Stand-Alone Power Requirements** (AC Power) | Nominal Operating Voltage | 18.5 V |
| | | Average Operating Power | TBD W |
| | | Max Operating Power | < 90 W |
| | **Temperature** | Operating* | 32° to 95° F (0° to 35° C) (not writing optical)<br>41° to 95° F (5° to 35° C) (writing optical) |
| | | Non-operating | -4° to 140° F (-20° to 60° C) |
| | **Relative Humidity** | Operating | 10% to 90%, non-condensing |
| | | Non-operating | 5% to 95%, 101.6° F (38.7° C) maximum wet bulb temperature |
| | **Shock** | Operating | 125 G, 2 ms, half-sine |
| | | Non-operating | 200 G, 2 ms, half-sine |
| | **Random Vibration** | Operating | 0.75 grms |
| | | Non-operating | 1.50 grms |
| | **Altitude** (unpressurized) | Operating | -50 to 10,000 ft (-15.24 to 3,048 m) |
| | | Non-operating | -50 to 40,000 ft (-15.24 to 12,192 m) |
| | **Planned Industry Standard Certifications** | UL | Yes |
| | | CSA | Yes |
| | | FCC Compliance | Yes |
| | | ENERGY STAR® | Select models* |
| | | EPEAT | Gold target** |
| | | ICES | Yes |
| | | Australia / NZ A-Tick Compliance | Yes |
| | | CCC | Yes |

| | |
|---|---|
| Japan VCCI Compliance | Yes |
| KCC | Yes |
| BSMI | Yes |
| CE Marking Compliance | Yes |

* Microsoft Windows required for ENERGY STAR qualification. Configurations of the HP ProBook 6465b and HP ProBook 6565b with a Microsoft OS that are ENERGY STAR qualified and are identified as HP ProBook 6465b ENERGY STAR and HP ProBook 6565b ENERGY STAR on HP websites and on www.energystar.gov.

** EPEAT Registered Gold in U.S. EPEAT registration varies by country. See www.epeat.net for registration status by country.

NOTE: For accessibility information on HP products, please visit: http://www.hp.com/accessibility.

| | | |
|---|---|---|
| Audio | SRS Premium Sound | |
| Hardware | Implementation | IDT 92HD87 High Definition CODEC |
| | Touch-Sensitive Volume Controls | Volume up, volume down, and mute |
| | Full Duplex | Yes |
| | Microphone In | Stereo |
| | Headphone/Line Out | Stereo |
| | Integrated Microphone | Yes, dual digital microphone array when equipped with optional webcam |
| Audio Output Quality | Frequency Response | 20 Hz – 20 kHz |
| | Signal to Noise Ratio | >85 dB |
| | Total Harmonic Distortion | 0.01% |
| | Noise Floor | –110 dB |
| | Play/Record Sampling Rate(s) | 8 kHz – 48kHz |
| | DAC | 16, 20 or 24-bit |
| | ADC | 16 or 20-bit |
| Integrated Stereo Speakers | Power Rating | 2 Watts |
| | Impedance | 4 Ohms |
| Power | | |

*Technical Specifications*

| | | | |
|---|---|---|---|
| HP 90W Smart AC Adapter | Dimensions | 5.00 x 1.97 x 1.1 in (12.7 x 5.0 x 2.9 cm) | |
| | Weight | 0.82 lb (370 g) | |
| | Input | 100 to 240 VAC | |
| | | Input Efficiency | 87% min at 115 VAC |
| | | Input frequency range | 47 to 63 Hz |
| | | Input AC current | 1.5 A at 90 VAC, 0.75 A at 180 VAC PFC Version |
| | | | 2.4 A at 90 VAC, 1.2 A at 180 VAC NON PFC Version |
| | Output | Output power | 90W |
| | | DC output | 19.0V |
| | | Hold-up time | 5 msec at 115 VAC input |
| | | Output current limit | <11A, Over voltage protection- 29V max automatic shutdown |
| | Connector | 3 pin/grounded, mates with interchangeable cords | |
| | Environmental Design | Operating temperature | 32° to 104° F (0° to 40° C) |
| | | Non-operating (storage) temperature | -4° to 149° F (-20° to 65° C) |
| | | Altitude | 0 to 10,000 ft (0 to 3,048 m) |
| | | Humidity | 20% to 80% |
| | | Storage Humidity | 10% to 90% |
| | EMI and Safety Certifications | CE Mark - full compliance with LVD and EMC directives; Worldwide safety standards - IEC60950, EN60950, UL60950, Class1, SELV; Agency approvals - C-UL-US, NORDICS, DENAN, EN55022 Class B, FCC Class B, CISPR22 Class B, CCC, NOM-1 NYCE; MTBF- over 200,000 hours at 25°C ambient condition. | |

| | | | |
|---|---|---|---|
| Optional HP BB09 Ultra Extended Life Notebook Battery | Dimensions (H x W x L) | 1.2 x 5.9 x 11.4 in (3x15x29cm) | |
| | Weight (max) | 1.5lb, (.682kg) | |
| | Cells/Type | Lithium-Ion | |
| | Energy | Voltage | 11.25V |
| | | Amp-hour capacity | 8.85Ah |
| | | Watt-hour capacity | 100Wh |
| | Temperature | Operating (Charging) | 32° to 113° F (0° to 45° C) |
| | | Operating (Discharging) | 14° to 122° F(-10° to 50° C) |
| | | Non-operating | -4° to 122° F (-20° to 50° C) |
| | Battery Re-Charge Time | System in OFF or Standby Mode | 3.5 to 5 hours |
| | | System ON | 4 to 7 hours |
| | Fuel Gauge LED | Yes | |
| | Warranty | 1 year | |
| | Optional Travel Battery Available | NA | |

| | | | |
|---|---|---|---|
| Optional HP ST09 Extended Life Notebook Battery | **Dimensions** (H x W x L) | 1.2 x 6.1 x 12 in (3x15.5x30.5cm) | |
| | **Weight** (max) | 1.2lb, (.550kg) | |
| | **Cells/Type** | Lithium-Ion Polymer | |
| | **Energy** | Voltage | 11.1V |
| | | Amp-hour capacity | 6.6Ah |
| | | Watt-hour capacity | 73Wh |
| | **Temperature** | Operating (Charging) | 32° to 113° F (0° to 45° C) |
| | | Operating (Discharging) | 14° to 122° F(-10° to 50° C) |
| | | Non-operating | -4° to 122° F (-20° to 50° C) |
| | **Battery Re-Charge Time** | System in OFF or Standby Mode | 3.5 to 5 hours |
| | | System ON | 4 to 7 hours |
| | **Fuel Gauge LED** | Yes | |
| | **Warranty** | 1 year | |
| | **Optional Travel Battery Available** | NA | |

| | | | |
|---|---|---|---|
| Optional HP 6-cell (55 WHr) Long Life Battery | **Dimensions** (H x W x L) | 0.8 x 1.8 x 8.0in (2.0 x 4.7 x 20.5cm) | |
| | **Weight** (max) | .72lb, (.323kg) | |
| | **Cells/Type** | Lithium-Ion | |
| | **Energy** | Voltage | 10.8V |
| | | Amp-hour capacity | 5.1Ah |
| | | Watt-hour capacity | 55Wh |
| | **Temperature** | Operating (Charging) | 32° to 113° F (0° to 45° C) |
| | | Operating (Discharging) | 14° to 122° F(-10° to 50° C) |
| | | Non-operating | -4° to 122° F (-20° to 50° C) |
| | **Battery Re-Charge Time** | System in OFF or Standby Mode | 2.5 hours |
| | | System ON | 3 to 5 hours |
| | **Fuel Gauge LED** | No | |
| | **Warranty** | 3 years | |
| | **Optional Travel Battery Available** | Yes | |

*Technical Specifications*

| | | | |
|---|---|---|---|
| HP 9-cell (100 WHr) Lithium-Ion Primary battery | Dimensions (H x W x L) | 0.8 x 2.4 x 8.1in (2 x 6.6 x 20.5cm) | |
| | Weight (max) | 1.1lb, (.488kg) | |
| | Cells/Type | Lithium-Ion | |
| | Energy | Voltage | 11.25V |
| | | Amp-hour capacity | 8.85Ah |
| | | Watt-hour capacity | 100Wh |
| | Temperature | Operating (Charging) | 32° to 113° F (0° to 45° C) |
| | | Operating (Discharging) | 14° to 122° F(-10° to 50° C) |
| | | Non-operating | -4° to 122° F (-20° to 50° C) |
| | Battery Re-Charge Time | System in OFF or Standby Mode | 3.5 to 5 hours |
| | | System ON | 4 to 7 hours |
| | Fuel Gauge LED | No | |
| | Warranty | 1 year | |
| | Optional Travel Battery Available | Yes | |

| | | | |
|---|---|---|---|
| HP 6-cell (55 WHr) Lithium-Ion Primary battery | Dimensions (H x W x L) | 0.8 x 1.8 x 8.0in (2.0 x 4.7 x 20.5cm) | |
| | Weight (max) | .70lb, (.313kg) | |
| | Cells/Type | Lithium-Ion | |
| | Energy | Voltage | 10.8V |
| | | Amp-hour capacity | 5.1Ah |
| | | Watt-hour capacity | 55Wh |
| | Temperature | Operating (Charging) | 32° to 113° F (0° to 45° C) |
| | | Operating (Discharging) | 14° to 122° F(-10° to 50° C) |
| | | Non-operating | -4° to 122° F (-20° to 50° C) |
| | Battery Re-Charge Time | System in OFF or Standby Mode | 2.5 hours |
| | | System ON | 3 to 5 hours |
| | Fuel Gauge LED | No | |
| | Warranty | 1 year | |
| | Optional Travel Battery Available | Yes | |

Displays

*Technical Specifications*

| | | | |
|---|---|---|---|
| 14.0-inch LED HD (1366 x 768) anti-glare | Active Area (W x H) | 12.74 x 7.56 in (32.4 x 19.2 cm) | |
| | Diagonal Size | 14.0 in (35.6cm) | |
| | Surface Treatment | Anti-glare | |
| | Contrast Ratio | 300:1 (typical) | |
| | Refresh Rate | 60 Hz | |
| | Brightness | 200 nit (typical) | |
| | Pixel Resolution | Pitch | 0.227 mm |
| | | Format | 1366 x 768 |
| | | Configuration | RGB Stripe |
| | Backlight | LED | |
| | PPI | 112 ppi | |
| | Viewing Angle | ±30° Horizontal, ±10° Vertical (minimum)<br>30/30/20/10 (Left/Right/Down/Up) (minimum) or<br>45/45/35/25 (Left/Right/Down/Up) (typical) | |

| | | | |
|---|---|---|---|
| 14.0-inch LED HD+ (1600 x 900) anti-glare | Dimensions (W x H) | 323.5 mm x 192.0 mm (typ) | |
| | Diagonal Size | 14.0 in (35.6cm) | |
| | Surface Treatment | Anti-glare | |
| | Contrast Ratio | 300 (min) | |
| | Refresh Rate | 60 Hz | |
| | Brightness | 200 nits (typ) | |
| | Pixel Resolution | Pitch | 0.1935mm |
| | | Format | 1600 x 900 |
| | | Configuration | RGB Strip |
| | Backlight | LED | |
| | PPI | 131 ppi | |
| | Viewing Angle | 30/30/20/10 (Left/Right/Down/Up) (minimum) | |

*Technical Specifications*

| | | | |
|---|---|---|---|
| 15.6-inch LED HD (1366 x 768) anti-glare | Active Area (W x H) | 13.54 x 7.59 in (34.4 x 19.4 cm) | |
| | Diagonal Size | 15.6 in (39.6cm) | |
| | Surface Treatment | Anti-glare | |
| | Contrast Ratio | 300:1 (typical) | |
| | Refresh Rate | 60 Hz | |
| | Brightness | 200 nit (typical) | |
| | Pixel Resolution | Pitch | 0.252 mm |
| | | Format | 1366 x 768 |
| | | Configuration | RGB Stripe |
| | Backlight | LED | |
| | PPI | 100 ppi | |
| | Viewing Angle | ±30° Horizontal, ±10° Vertical (minimum)<br>30/30/20/10 (Left/Right/Down/Up) (minimum) or<br>45/45/35/25 (Left/Right/Down/Up) (typical) | |

| | | | |
|---|---|---|---|
| 15.6-inch LED HD+ WVA (1600 x 900) anti-glare | Active Area (W x H) | 13.54 x 7.59 in (34.4 x 19.4 cm) | |
| | Diagonal Size | 15.6 in (39.6 cm) | |
| | Surface Treatment | Anti-glare | |
| | Contrast Ratio | 300:1 (typical) | |
| | Refresh Rate | 60 Hz | |
| | Brightness | 200 nit (typical) | |
| | Pixel Resolution | Pitch | 0.215 mm |
| | | Format | 1600 x 900 |
| | | Configuration | RGB Stripe |
| | Backlight | LED | |
| | PPI | 118 ppi | |
| | Viewing Angle | ±60° Horizontal, ± 50° Vertical (minimum) or<br>±70° Horizontal, ±60° Vertical (typical) | |

Internal Storage

*Technical Specifications*

| | | | |
|---|---|---|---|
| 500 GB 7200 rpm SATA Hard Drive | Drive Weight | 0.25 lbs (115g) | |
| | Capacity | 500 GB | |
| | Height | 0.37 in (9.5 mm) | |
| | Width | 2.75 in (70 mm) | |
| | Interface | ATA-8, SATA 2.6, 3.0 Gb/s, NCQ | |
| | Transfer Rate | Synchronous (maximum) | 300 MB/s (Drive Capability) |
| | Seek Time (typical reads, including settling) | Single Track | 1.5 ms |
| | | Average | 11 ms |
| | | Maximum | 22 ms |
| | Rotational Speed | 7200 rpm | |
| | Logical Blocks | 976,773,168 | |
| | Operating Temperature | 32° to 140° F (0° to 60° C) [case temp] | |
| | Features | ATA Security | |

| | | | |
|---|---|---|---|
| 320 GB 7200 rpm SATA Hard Drive | Drive Weight | 0.25 lbs (115 g) | |
| | Capacity | 320 GB | |
| | Height | 0.37 in (9.5 mm) | |
| | Width | 2.75 in (70 mm) | |
| | Interface | ATA-8, SATA 2.6, 3.0 Gb/s, NCQ | |
| | Transfer Rate | Synchronous (maximum) | 300 MB/s (Drive Capability) |
| | Seek Time (typical reads, including settling) | Single Track | 1.5 ms |
| | | Average | 11 ms |
| | | Maximum | 22 ms |
| | Rotational Speed | 7200 rpm | |
| | Logical Blocks | 625,142,448 | |
| | Operating Temperature | 32° to 140° F (0° to 60° C) [case temp] | |
| | Features | ATA Security | |

*Technical Specifications*

| | | | |
|---|---|---|---|
| 250 GB 7200 rpm SATA Hard Drive | Drive Weight | 0.25 lbs (115g) | |
| | Capacity | 250 GB | |
| | Height | 0.37 in (9.5 mm) | |
| | Width | 2.75 in (70 mm) | |
| | Interface | ATA-8, SATA 2.6, 3.0 Gb/s, NCQ | |
| | Transfer Rate | Synchronous (maximum) | 300 MB/s (Drive Capability) |
| | Seek Time (typical reads, including settling) | Single Track | 1.5 ms |
| | | Average | 11 ms |
| | | Maximum | 22 ms |
| | Rotational Speed | 7200 rpm | |
| | Logical Blocks | 488,397,168 | |
| | Operating Temperature | 32° to 140° F (0° to 60° C) [case temp] | |
| | Features | ATA Security | |

| | | | |
|---|---|---|---|
| 128 GB 2.5-inch SATA Solid State Drive | Drive Weight | 75 Grams | |
| | Capacity | 128 GB | |
| | Height | 0.276 in (7 mm) | |
| | Width | 2.76 in (70 mm) | |
| | Interface | SATA Gen 2 | |
| | Performance | Maximum Sequential Read | Maximum Sequential Write |
| | | 250 MB/s | 140 MB/s |
| | Logical Blocks | 250,069,680 | |
| | Operating Temperature | 32° to 158°F (0° to 70°C) [case temp] | |
| | Features | ATA Security; ATA-7; SATA 2.6; DIPM; TRIM | |

Optical Drives

*Technical Specifications*

| | | | |
|---|---|---|---|
| DVD-ROM Drive | Access Times | Random | < 140 ms CD (typical)<br>< 160 ms DVD (typical) |
| | Max Data Transfer Rate | 24X CD-ROM<br>8X-DVD | |
| | Transfer Mode | UDMA Mode 5 | |
| | Interface | Gen 1 SATA | |
| | Supported Media (read) | CD-DA, CD-TEXT, CD-ROM, CD-ROM XA, MIXED MODE CD, CD-I, CD-I Bridge (Photo-CD, Video CD), Multisession CD (Photo-CD, CD-EXTRA, Portfolio, CD-R, CD-RW), CD-R, CD-RW, DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), DVD-R, DVD-RW, DVD+R, DVD+RW, DVD-RAM | |
| | Supported Media (write) | None | |
| | Max Media Capacity (read) | 8.5GB | |
| | Transport | Tray Loading | |

| | | | |
|---|---|---|---|
| DVD+/-RW SuperMulti DL Drive | Access Times | Random | <140ms CD (typical)<br>< 160 ms DVD (typical) |
| | Max Data Transfer Rate | 24X CD-ROM<br>8X DVD<br>24X CD-R<br>24X CD-RW<br>8X DVD+R<br>8X DVD+RW<br>8X DVD-R<br>6X DVD-RW<br>6X - DVD+R Dual Layer<br>6X - DVD-R Dual Layer<br>5X DVD-RAM | |
| | Transfer Mode | UDMA Mode 5 | |
| | Interface | Gen 1 SATA | |
| | Supported Media (read) | CD-DA, CD-TEXT, CD-ROM, CD-ROM XA, MIXED MODE CD, CD-I, CD-I Bridge (Photo-CD, Video CD), Multisession CD (Photo-CD, CD-EXTRA, Portfolio, CD-R, CD-RW), CD-R, CD-RW, DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), DVD-R, DVD-RW, DVD+R, DVD+RW, DVD-RAM | |
| | Supported Media (write) | CD-R, CD-RW, DVD+R, DVD+RW, DVD-R, DVD-RW, DVD-RAM, DVD+R DL, DVD-R DL | |
| | Max Media Capacity (read) | 8.5 GB | |
| | Max Media Capacity (write) | 8.5 GB | |
| | Transport | Tray Loading | |

| | | | |
|---|---|---|---|
| Blu-ray ROM DVD+/-RW SuperMulti DL Drive | Access Times | Random | <190 ms CD-ROM (typical)<br>< 180ms DVD-ROM (typical)<br><230 ms BD-ROM (typical) |
| | Max Data Transfer Rate | 24X CD-ROM<br>8X DVD-ROM<br>24X CD-R<br>16X CD-RW<br>8X DVD+R<br>8X DVD+RW<br>8X DVD-R<br>6X DVD-RW<br>4X - DVD+R Dual Layer<br>4X - DVD-R Dual Layer<br>5X DVD-RAM<br>6X BD-ROM | |
| | Transfer Mode | UDMA Mode 5 | |
| | Interface | Gen 1 SATA | |
| | Supported Media (read) | CD-DA, , CD-TEXT, CD-ROM, CD-ROM XA, MIXED MODE CD, CD-I, CD-I Bridge (Photo-CD, Video CD), Multisession CD (Photo-CD, CD-EXTRA, Portfolio, CD-R, CD-RW), CD-R, CD-RW, DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), DVD-R, DVD-RW, DVD+R, DVD+RW. DVD-RAM, BD-ROM, BD-R, BD-RE | |
| | Supported Media (write) | CD-R, CD-RW, DVD+R, DVD+R DL, DVD+RW, DVD-R, DVD-R DL, DVD-RW, DVD-RAM | |
| | Max Media Capacity (read) | 50.0 GB | |
| | Max Media Capacity (write) | 8.5GB | |
| | Transport | Tray Loading | |

Security

| | | |
|---|---|---|
| HP Fingerprint Sensor (optional) | Mobile Voltage Operation | 3.0V-3.6V Single Supply |
| | Operating Temperature | 32° – 158°F (0° – 70°C) |
| | Current Consumption @ 3.3V | Less than 70 mA peak imaging and scrolling<br>Less than 25 mA hardware finger detection<br>Advanced Power Management |
| | High-Rate Image Capture | Up to 240 image frames /sec |
| | ESD Resistance | IEC 61000-4-2 Level 4 (±15KV) |
| | Detection Matrix | 192 x 16 Pixels<br>9.7 mm x 0.81 mm<br>500 ppi High-Resolution Images |

## Communications

| | | |
|---|---|---|
| V.92 56K Data/Fax Modem | Form Factor | MDC 1.5 Daughtercard |
| | Power Management Support | APM Revision 1.2, ACPI |
| | Approvals/ Certifications | UL, CSA, NEMKO, CCIB, Industry Canada, FCC Part 68, CTR21, FCC Part 15 Class B, Canadian ICES-003 Class B, C.I.S.P.R.22, Australian ACA, CE Mark, Other Countries |
| | Data Mode Capabilities | V.92 data<br>V.8bis<br>V.80<br>V44, V.42bis, MNP5 (Compression)<br>V.42 (LAPM, MNP2-4) (Error Correction)<br>Optional symbol rates:<br>2800, 3429<br>Asymmetric Symbol rates<br>Synchronous primary channel data signaling rates:<br>3600, 31200<br>Automatic rate re-negotiation<br>V.34<br>V.32bis<br>V.32<br>V.23<br>V.22bis<br>V.22<br>V.21<br>Bell 212A<br>Bell 103J |
| | Fax Mode Capabilities | TIA/EIA-578-B (Class 1)<br>T.30, T.4 (Group 3)<br>V.17<br>V.29<br>V.27ter<br>V.21 Channel 2 |

| | | |
|---|---|---|
| | Command Set | V.250 (Partial)<br>TIA-602<br>Identification: +GMI, +GMM, +GMR<br>Port control: +IPR, +ICF, +IFC, +ILRR<br>Modulation: +MS, +MR, +MA<br>Error control: +ES, +ER, +EB, +ESR, +ETBM<br>Data compression: +DS, +DR<br>V.251 |
| HP un2430 EV-DO/HSPA Mobile Broadband Module | Technology/Operating Bands | GSM/GPRS/EDGE: 850MHz(Cell), 900MHz(EGSM), 1800MHz(DCS), 1900MHz (PCS)<br>UMTS/WCDMA with receive diversity: 2100MHz (UTRA FDD Band I), 1900MHz (UTRA FDD Band II), AWS (UTRA FDD Band IV), 900MHz(UTRA FDD Band VIII), 850MHz (UTRA FDD Band V)<br>1xEVDO/1xRTT with receive diversity: 850MHz (Band Class0-Cell), 1900MHz (Band Class1-PCS) |
| | Wireless Protocol Standards | GSM/GPRS/EDGE: Class A, Multi-slot class 10 operation, coding schemes CS1 - CS4 and MSC1 - MSC9.<br>UMTS/WCDMA: Release 99 and Release 6<br>CDMA: 1xEVDO Release 0 and Release A, IS-95A, IS-95B, IS-856, IS-2000 |
| | Wireless Parametric Standards | Meets or exceeds TIA/EIA IS-98-D |
| | Maximum Data Rates | UMTS (HSPA) - 14.4 Mbps (Download ), 5.76Mbps (Upload)<br>CDMA (EVDO Release A) - 3.1 Mbps (Download), 1.8Mbps (Upload) |
| | GPS | Standalone GPS enabled<br>gpsOneXTRATM™ |
| | GPS Bands | L1 - 1575.42 MHz |
| | Maximum Output Power | GSM/GPRS/EDGE: 32dBm (+/-1)<br>WCDMA: 24dBm (+0.7/-2.3)<br>CDMA: 24dBm (+0.7/-2) |
| | Maximum Power Consumption | 2750mA (peak); 1100mA (average) |
| | Power Consumption, Idle Not Connected | 20 mA |
| | Power Management | USB selective suspend<br>Integrated notebook wireless button |
| | Antenna Type | Dual high efficiency 5 band antennae with spatial diversity, mounted in the display enclosure |
| | Form Factor | PCI-Express MiniCard, USB 2.0 interface |
| | Weight | 11.5 g |
| | Dimensions (Length x Width x Thickness) | 2.01 x 1.18 x 0.18 in (51 x 30 x 5 mm) |
| | Voltage, Operating | 3.3v +/- 10% |
| | Temperature, Operating (from TIA/EIA/IS-98-D) | -22° to 158° F (-30° to 70° C) (full RF performance)<br>-22° to 167° F (-30° to 75° C) (reduced RF performance) |

| | | |
|---|---|---|
| | **Temperature, Non-operating, 96 hours** (from MIL-STD 202 Method 108) | -40° to 185° F (-40° to 85° C) |
| | **Humidity, Non-operating** | 95% relative humidity for 48 hours @ 185° F (85° C) (non-condensing) |
| | **Configuration Utilities** | HP Connection Manager |
| | **LED Activity** | LED Off - Radio Off;<br>Solid LED On - Radio On |
| **HP hs2340 HSPA+ Mobile Broadband Module** | **Technology/Operating Bands** | GSM/GPRS/EDGE: 850MHz(Cell), 900MHz(EGSM), 1800MHz(DCS), 1900MHz (PCS)<br>UMTS/WCDMA with receive diversity: 2100MHz (UTRA FDD Band I), 1900Mhz (UTRA FDD Band II), 900Mhz(UTRA FDD Band VIII), 850 MHz (UTRA FDD Band V) |
| | **Wireless Protocol Standards** | GSM/GPRS/EDGE: Class B, Multi-slot class 10 operation, coding schemes CS1 - CS4 and MSC1 - MSC9.<br>UMTS/WCDMA: Release 99 and Release 7<br>Advanced Receiver Type 3i |
| | **Wireless Parametric Standards** | Complies with 3GPP specifications |
| | **Maximum Data Rates** | UMTS (HSPA) - 21 Mbps (Download ), 5.76Mbps (Upload) |
| | **GPS** | Standalone, A-GPS (Internet- and Network assisted) |
| | **GPS Bands** | 1575.42 MHz (± 1.023 MHz) |
| | **Maximum Output Power** | GSM/EDGE<br>GSM850 & GSM900 bands<br>GPRS: +33 dBm ± 2 dBm (class 4)<br>EGPRS: +27 dBm ± 3 dBm (class E2)<br><br>DCS1800 & PCS1900 bands<br>GPRS: +30 dBm ± 2 dBm (class 1)<br>EGPRS: +26 dBm +4 / -3 dBm (class E2)<br><br>UMTS<br>UTRA FDD Bands<br>+24 dBm +4 / -3 dBm (class 3) |
| | **Maximum Power Consumption** | 2000mA (peak); 600mA (average) |
| | **Power Consumption, Sleep Mode** | 5 mA |
| | **Power Management** | USB selective suspend<br>Integrated notebook wireless button |
| | **Antenna Type** | Dual high efficiency 5 band antennae with spatial diversity, mounted in the display enclosure |
| | **Form Factor** | PCI-Express MiniCard, USB 2.0 interface |
| | **Weight** | < 12 g |

*Technical Specifications*

| | | |
|---|---|---|
| | **Dimensions** (Length x Width x Thickness) | 2.01 x 1.18 x 0.18 in (51 x 30 x 5 mm) |
| | **Voltage, Operating** | 3.3v +/- 9% |
| | **Temperature, Operating** | 14° to 149° F (-10° to 65° C) (full RF performance)<br>14° to 167° F (-10° to 75° C) (reduced RF performance) |
| | **Temperature, Non-operating, 96 hours** (from MIL-STD 202 Method 108) | -22° to 185° F (-30° to 85° C) |
| | **Humidity, Non-operating** | 85% relative humidity for 48 hours @ 185° F (85° C) (non-condensing) |
| | **Configuration Utilities** | HP Connection Manager |
| | **LED Activity** | LED Off - Radio Off;<br>Solid LED On - Radio On |
| **Broadcom 43224AGN 802.11a/b/g/n WiFi Adapter** | **Wireless LAN Standards** | IEEE 802.11a<br>IEEE 802.11b<br>IEEE 802.11g<br>IEEE 802.11n* |
| | **Interoperability** | Wi-Fi certified (802.11abg only)<br>Cisco Compatible Extensions Program compliant (802.11abg only) with Microsoft Windows Vista and XP (details at: http://www.hp.com/go/notebooks/WLAN) |
| | **Frequency Band** | 2.4 GHz and 5 GHz |
| | **Data Rates** | 802.11b: 1, 2, 5.5, 11 Mbps<br>802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps<br>802.11n: 6, 6.5, 9, 12, 13, 13.5, 18, 19.5, 24, 26, 27, 36, 39, 40.5, 48, 52, 54, 58.5, 65, 78, 81, 104, 108, 117, 121.5, 130, 135, 162, 216, 243, 270, 300 Mbps |
| | **Frequency Support** | 20 MHz: 2.4 GHz and 5 GHz bands<br>40 MHz: 2.4 GHz and 5 GHz bands |
| | **Modulation** | Direct Sequence Spread Spectrum<br>DBPSK, DQPSK, CCK, OFDM, BPSK, QPSK, 16-QAM, 64-QAM |
| | **Security**[1] | Supports 64- and 128-bit WEP, WPA, WPA2, hardware-accelerated AES, 802.1x authentication types EAP-TLS, EAP-TTLS, PEAP-GTC, PEAP-MSCHAPv2, LEAP, EAP-FAST.<br><br>Support for Cisco Security Features (proven compatibility with Cisco Aironet infrastructure products through the Cisco Compatible Extensions Program Version 4) with Microsoft Windows Vista and XP only. |
| | **Sub-channels** | Multinational support with frequency bands and channels compliant to local regulations. |
| | **Media Access Protocol** | CSMA/CA (Collision Avoidance) with ACK |
| | **Network Architecture Models** | Ad-hoc (Peer to Peer)<br>Infrastructure (Access Point Required) |
| | **Roaming** | IEEE 802.11 compliant roaming between access points |
| | **Output Power** (for CCK)[2] | 17 dBm , nominal |

| | | |
|---|---|---|
| **Output Power** (for OFDM; 15 dBm , nominal power varies by data rate)[2] | | |
| **Power Consumption** | Idle associated: 250 mW<br>Idle unassociated: 150 mW<br>Transmit/Receive 20 MHz channel: 2.0 W (max)<br>Transmit/Receive 40 MHz channel: 2.0 W (max) | |
| **Power Management** | ACPI compliant power management<br>802.11 compliant power saving mode | |
| **Receiver Sensitivity**[3] | 270 Mbps: -61dBm, , 54 Mbps: -72 dBm, 11 Mbps: -85 dBm , 1 Mbps: -92 dBm | |
| **Antenna type** | High efficiency dual band antenna with spatial diversity, mounted in the display enclosure | |
| **Form Factor** | PCI-Express Half-MiniCard | |
| **Weight** | 0.013 lb (6 g) | |
| **Dimensions** | 0.19 x 1.06 x 1.18 in (4.75 x 26.8 x 30 mm) | |
| **Operating Voltage** | 3.3v +/- 10% | |
| **Temperature** | Operating<br>Non-operating | 14° to 149° F (-10° to 65° C)<br>-40° to 176° F (-40° to 80° C) |
| **Humidity** | Operating<br>Non-operating | 10% to 90% (non-condensing)<br>5% to 95% (non-condensing) |
| **Altitude** | Operating<br>Non-operating | 0 to 10,000 ft (3,048 m)<br>0 to 50,000 ft (15,240 m) |
| **LED Activity** | LED Off - Radio OFF; Solid LED On - Radio ON | |

1. Check latest software/driver release for updates on supported security features.
2. Maximum output power may vary by country according to local regulations.
3. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CCK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).
4. WLAN supplier's client utility is required for Cisco Compatible Extensions support with Microsoft Windows XP. WLAN may also be compatible with certain third-party software supplicants. WLAN supplier IHV extensions required for Cisco Compatible Extensions support for Microsoft Windows Vista.

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| | | |
|---|---|---|
| **Broadcom 4313GN 802.11b/g/n WiFi Adapter** | **Wireless LAN Standards** | IEEE 802.11b<br>IEEE 802.11g<br>IEEE 802.11n |
| | **Interoperability** | Wi-Fi certified<br>Cisco Compatible Extensions Program compliant with Microsoft Win7, Vista and XP (details at: http://www.hp.com/go/notebooks/WLAN) |
| | **Frequency Band** | 2.4 GHz |
| | **Data Rates** | 802.11b: 1, 2, 5.5, 11 Mbps<br>802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps<br>802.11n: 6.5, 7.2, 13, 14.4, 19.5, 21.7, 26, 28.9, 39, 43.3, 52, 57.8, 58.5, 65, 72.2Mbps |
| | **Frequency Support** | 20 MHz: 2.4 GHz bands |

*Technical Specifications*

| | | |
|---|---|---|
| **Modulation** | Direct Sequence Spread Spectrum<br>DBPSK, DQPSK, CCK, OFDM, BPSK, QPSK, 16-QAM, 64-QAM | |
| **Security**[1] | Supports 64- and 128-bit WEP, WPA, WPA2, hardware-accelerated AES, 802.1x authentication types EAP-TLS, EAP-TTLS, PEAP-GTC, PEAP-MSCHAPv2, LEAP, EAP-FAST.<br><br>Support for Cisco Security Features (proven compatibility with Cisco Aironet infrastructure products through the Cisco Compatible Extensions Program Version 4) with Microsoft Windows Vista and XP only. | |
| **Sub-channels** | Multinational support with frequency bands and channels compliant to local regulations. | |
| **Media Access Protocol** | CSMA/CA (Collision Avoidance) with ACK | |
| **Network Architecture Models** | Ad-hoc (Peer to Peer)<br>Infrastructure (Access Point Required) | |
| **Roaming** | IEEE 802.11 compliant roaming between access points | |
| **Output Power** (for CCK)[2] | 17 dBm , nominal | |
| **Output Power** (for OFDM; power varies by data rate)[2] | 15 dBm , nominal | |
| **Power Consumption** | Idle associated: 250 mW avg (CLKREQ enabled)<br>Idle unassociated: 425 mW avg<br>Transmit/Receive 20 MHz channel: 5.5 W (max) | |
| **Power Management** | ACPI compliant power management<br>802.11 compliant power saving mode | |
| **Receiver Sensitivity**[3] | 72.2 Mbps: -71dBm | |
| **Antenna type** | High efficiency dual band antenna with spatial diversity, usually mounted in the display enclosure | |
| **Form Factor** | PCI-Express Half-MiniCard | |
| **Weight** | 0.013 lb (6 g) | |
| **Dimensions** | 0.19 x 1.06 x 1.18 in (4.75 x 26.8 x 30 mm) | |
| **Operating Voltage** | 3.3v +/- 10% | |
| **Temperature** | Operating<br>Non-operating | 14° to 149° F (-10° to 65° C)<br>-40° to 176° F (-40° to 80° C) |
| **Humidity** | Operating<br>Non-operating | 10% to 90% (non-condensing)<br>5% to 95% (non-condensing) |
| **Altitude** | Operating<br>Non-operating | 0 to 10,000 ft (3,048 m)<br>0 to 50,000 ft (15,240 m) |
| **LED Activity** | LED Off - Radio OFF; Solid LED On - Radio ON | |

1. Check latest software/driver release for updates on supported security features.
2. Maximum output power may vary by country according to local regulations.
3. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CCK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).
4. WLAN supplier's client utility is required for Cisco Compatible Extensions support with Microsoft Windows XP. WLAN may also be compatible with certain third-party software supplicants. WLAN supplier IHV extensions required for Cisco Compatible Extensions support for Microsoft Windows Vista and Win7.

| | | |
|---|---|---|
| HP Integrated Module with Bluetooth 2.1+EDR Wireless Technology | Bluetooth Specification | 2.1+EDR Compliant |
| | Dimensions | 1.18 x 0.26 x 0.13 in (30 x 6.5 x 3.25 mm) |
| | Frequency Band | 2402 to 2480 MHz |
| | Number of Available Channels | 79 (1 MHz) available channels |
| | Data Rates and Throughput | 3 Mbps data rate; throughput up to 2.17 Mbps |
| | | Synchronous Connection Oriented links up to 3, 64 kbps, voice channels |
| | | Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric or 1306.9 kbps symmetric |
| | Transmit Power | -6 dBm to 4 dBm (Bluetooth Class II) |
| | Receiver Sensitivity | Better than -80 dBM at 0.1 % raw bit error rate |
| | Power Consumption | Peak (Tx) 264 mW |
| | | Peak (Rx) 231 mW |
| | | Sleep <1 mW |
| | Antenna | Internally integrated within module |
| | Range | Up 33 ft (10 m) |
| | Electrical Interface | USB 2.0 compliant |
| | | Microsoft Windows Plug and Play compliant |
| | Bluetooth Software Supported | Broadcom Bluetooth for Windows |
| | | Microsoft Windows Bluetooth Software |
| | Link Topology | Point to Point, Multipoint Pico Nets up to 7 slaves |
| | Security | Full support of Bluetooth Security Provisions |
| | Power Management | Microsoft Windows ACPI, and USB Bus Support |
| | | Self configurable to optimize power conservation in all operating modes, including Standby, Hold, Park, and Sniff |
| | Certifications | All necessary regulatory approvals for supported countries, including: |
| | | FCC (47 CFR) Part 15C, Section 15.247 & 15.249 |
| | | ETS 300 328, ETS 300 826 |
| | | Low Voltage Directive IEC950 |
| | | UL, CSA, and CE Mark |
| | Temperature | Operating -4° to 158° F (-20° to 70° C) |
| | | Non-operating -40° to 176° F (-40° to 80° C) |
| | Humidity | Operating 10% to 90% |
| | | Non-operating 5% to 95% |
| | Altitude | Operating 15,000 ft (4,572 m) |
| | | Non-operating 40,000 ft (12,192 m) |
| | Bluetooth Profiles Supported | Serial Port Profile (SPP)[1] |
| | | Service Discovery Applicaton Profile (SDAP) |
| | | Dial-Up Networking (DUN)[1,2] |
| | | Generic Object Exchange Profile (GOEP)[1,2] |
| | | Object Push Profile (OPP)[1,2] |

File Transfer Profile (FTP)
Synchronization Profile (SYNC)
Hard Copy Cable Replacement (HCRP)[1,2]
Personal Area Networking Profile (PAN)[1,2]
Human Interface Device Profile (HID)[1,2,3]
FAX Profile (FAX)
Basic Imaging Profile (BIP)[2]
Headset Profile (HSP)
Hands Free Profile (HFP)
Advanced Audio Distribution Profile (A2DP)

1. indicates the profile is supported by Microsoft Windows XP SP2
2. indicates the profile is part of Windows Vista

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**Environmental Data**

**Eco-Label Certifications**

This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks:

- US ENERGY STAR®
- IT ECO declaration
- EPEAT - Gold where HP registers commercial notebook products. See http://www.epeat.net for registration status in your country.

**System Configuration**

The configuration used for the Energy Consumption and Declared Noise Emissions data for the Convertible Mini tower Desktop model is based on a "Typically Configured Notebook"

**HP ProBook 6465b Notebook PC**

| Energy Consumption | 115 VAC | 230 VAC | 100 VAC |
|---|---|---|---|
| Normal Operation | 11.16 W | 11.04 W | 11.09 W |
| Sleep (Energy Star low power mode) | 0.73 W | 0.82 W | 0.73 W |
| Off | 0.47 W | 0.55 W | 0.47 W |

| Heat Dissipation* | 115 VAC | 230 VAC | 100 VAC |
|---|---|---|---|
| Normal Operation | 38 BTU/hr | 38 BTU/hr | 38 BTU/hr |
| Sleep | 2 BTU/hr | 3 BTU/hr | 2 BTU/hr |
| Off | 2 BTU/hr | 1 BTU/hr | 2 BTU/hr |

* Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.

**Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)**

| System Fan Off | Sound Power (LWAd, bels) | Sound Pressure (LpAm, decibels) |
|---|---|---|
| Idle | 3.4 | 25.8 |
| Fixed Disk (random writes) | 3.4 | 43 |

System fan is usually off except when charging the battery

**Batteries**

This battery(s) in this product comply with EU Directive 2006/66/EC

Batteries used in the product do not contain:

- Mercury greater the 5ppm by weight
- Cadmium greater than 10ppm by weight

The battery type and chemistry used in the product is:
CR2032 (coin cell), Li-ion
6-cell high capacity Lithium-Ion battery (optional 8 cell available)

**Additional information**

This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2002/95/EC.

This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC.

This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986).

This product is in compliance with the IEEE 1680 (EPEAT) standard at the Gold level, see www.epeat.net

Plastics parts weighing over 25 grams used in the product are marked per ISO 11469 and ISO1043.

This product contains 0% post consumer recycled plastic (by wt.)

This product is greater than 95.3% recycle-able when properly disposed of at end of life.

Packaging Materials

- External:
  - Corrugated – 500 g
  - CANON bags – several layers – 5 g
- Internal:
  - Polypropylene – 15 g
  - Molded Pulp – 180 g
- The Corrugated packaging material is made from 80% recycled content.
- The CANON bags – several layers packaging material is made from 80% recycled content.
- The Polypropylene packaging material is made from 60% recycled content.
- The Molded Pulp packaging material is made from 60% recycled content.

HP follows these guidelines to decrease the environmental impact of product packaging:

- Eliminate the use of heavy metals such as lead, chromium, mercury

and cadmium in packaging materials.
- Eliminate the use of ozone-depleting substances (ODS) in packaging materials.
- Design packaging materials for ease of disassembly.
- Maximize the use of post-consumer recycled content materials in packaging materials.
- Use readily recyclable packaging materials such as paper and corrugated materials.
- Reduce size and weight of packages to improve transportation fuel efficiency.
- Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.

HP ProBook 6565b Notebook PC

| Energy Consumption | 115 VAC | 230 VAC | 100 VAC |
|---|---|---|---|
| Normal Operation | 14.29 W | 14.69 W | 14.28 W |
| Sleep (Energy Star low power mode) | 0.81 W | 0.90 W | 0.80 W |
| Off | 0.45 W | 0.51 W | 0.44 W |

| Heat Dissipation* | 115 VAC | 230 VAC | 100 VAC |
|---|---|---|---|
| Normal Operation | 49 BTU/hr | 50 BTU/hr | 49 BTU/hr |
| Sleep | 3 BTU/hr | 3 BTU/hr | 3 BTU/hr |
| Off | 1 BTU/hr | 2 BTU/hr | 1 BTU/hr |

* Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.

Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)

| System Fan Off | Sound Power (LWAd, bels) | Sound Pressure (LpAm, decibels) |
|---|---|---|
| Idle | 2.9 | 23 |
| Fixed Disk (random writes) | 4.0 | 33 |

System fan is usually off except when charging the battery

**Batteries**

This battery(s) in this product comply with EU Directive 2006/66/EC

Batteries used in the product do not contain:

- Mercury greater the 5ppm by weight
- Cadmium greater than 10ppm by weight

The battery type and chemistry used in the product is:
CR2032 (coin cell), Li-ion
6-cell high capacity Lithium-Ion battery (optional 8 cell available)

**Additional information**

This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2002/95/EC.

This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive - 2002/96/EC.

This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986).

This product is in compliance with the IEEE 1680 (EPEAT) standard at the Gold level, see www.epeat.net

Plastics parts weighing over 25 grams used in the product are marked per ISO 11469 and ISO1043.

This product contains 0% post consumer recycled plastic (by wt.)

This product is greater than 95.3% recycle-able when properly disposed of at end of life.

Packaging Materials

- External:
  - Paper / Cardboard – 310 g
  - Corrugated carton – 375 g
- Internal:
  - Polyethylene low density foam – 22 g
- The Paper / Cardboard packaging material is made from 80% recycled content.
- The Corrugated carton packaging material is made from 80% recycled content.
- The Polyethylene low density foam packaging material is made from 80% recycled content.

HP follows these guidelines to decrease the environmental impact of product packaging:

- Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.
- Eliminate the use of ozone-depleting substances (ODS) in packaging materials.
- Design packaging materials for ease of disassembly.
- Maximize the use of post-consumer recycled content materials in packaging materials.
- Use readily recyclable packaging materials such as paper and corrugated materials.
- Reduce size and weight of packages to improve transportation fuel efficiency.
- Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.

**Material Usage**

This product does not contain any of the following substances in excess of regulatory limits (for reference of these limits please refer to the HP General Specification of the Environment: (http://www.hp.com/hpinfo/globalcitizenship/environment/supplychain/gen_specifications.html):

- Asbestos
- Certain Azo Colorants
- Certain Brominated Flame Retardants – may not be used as flame retardants in plastics
- Cadmium
- Chlorinated Hydrocarbons
- Chlorinated Paraffins
- Formaldehyde
- Halogenated Diphenyl Methanes
- Lead carbonates and sulfates
- Lead and Lead compounds
- Mercuric Oxide Batteries
- Ozone Depleting Substances
- Polybrominated Biphenyls (PBBs)
- Polybrominated Biphenyl Ethers (PBBEs)
- Polybrominated Biphenyl Oxides (PBBOs)
- Polychlorinated Biphenyl (PCB)
- Polychlorinated Terphenyls (PCT)
- Polyvinyl Chloride (PVC) – except for wires and cables, and certain retail packaging has been voluntarily removed from most applications.
- Radioactive Substances
- Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)
- Nickel finishes that release greater than 0.5 µgrams/cm2/week, measured according to EN 1811:1998, are not used on any product surface designed to be frequently handled or touched by users.

**End-of-life Management and Recycling**

Hewlett-Packard offers end-of-life HP product return and recycling programs in many geographic areas. To recycle your product, please go to: http://www.hp.com/go/reuse-recycle or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.

The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: http://www.hp.com/go/recyclers. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.

**Hewlett-Packard Corporate Environmental Information**

For more information about HP's commitment to the environment:
Global Citizenship Report
http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html
Environment website
http://www.hp.com/environment
Eco-label certifications
http://www.hp.com/hpinfo/globalcitizenship/environment/productdesign/ecolabels.html
ISO 14001 certificates:
http://www.hp.com/hpinfo/globalcitizenship/environment/operations/envmanagement.html

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